An introduction to syntax according to Generative Grammar Theories

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Contents

Chapter 1

An Introduction to Semantics

1.1 Generative Grammar (GG)

- GG is a theory of Grammar based on Noam Chomsky's principles.
- It is mainly based on syntax, though some other disciplines of linguistics can be approached by means of GG.
- Along these notes, we will study the main elements of this theory applied to English and, occasionally, to some other languages, mainly Romance ones.

1.2 Before syntax, there is semantics

- All current linguistic theories take semantics as their starting point.
- Semantics is the base from which all the rest of disciplines develop.
- Words (i.e., the recipients of meaning) are the first items children acquire.

1.3 A theory of semantics based on ≪predicates≫ and ≪valencies≫

- In order to understand the semantic value of a clause, we need settle the different kinds of predicates existing in any language.
- A predicate is a semantic term to refer to what is commonly known as *verb*.
- Predicates are then the cornerstone of sentence semantics.
- WPredicates may need some adjacent elements that complement their meaning.
  - **I bought.*
  - In this example, the sentence lacks an item, a 'what'.
  - **Learned French.*
  - In this sentence, one doesn't know 'who' learned French.
- In the former examples, both predicates, 'buy' and 'learn' need some extra adjacent elements which complement their whole meaning. Without these extra elements, predicates can't make up correct sentences.
- The accompanying elements around a predicate are ≪valencies≫.
- Therefore, predicates may require valencies to achieve a whole meaning.

1.4 Kinds of predicates according to the number of valencies they need

- Predicates containing no valencies: avalents.

It is raining

- Predicates containing one valency: monovalents.

<**The dog**> is barking

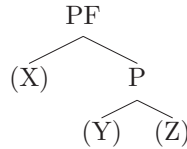
- Predicates containing two valencies: bivalents.

<**Mary**> watched <**a good film**>

- Predicates containing three valencies: trivalents.

<**Sarah**> just put <**the books**> <**on the table**>

1.5 How to represent Predicate Frames (PF)

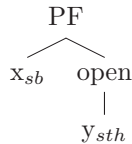
- The semantic structures of Predicate Frames can be represented through some kind of trees called stemmas.

- Codes

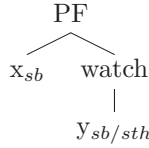
X	first valency	The first valency, or outer one, is the one that ≪triggers≫ events, actions or processes. It is usually identified with the syntactic subject.
Y	second valency	
Z	third valency	

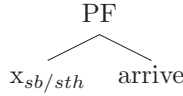
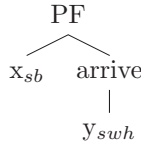
sb	somebody	It refers to the semantic nature of the valency: person, thing, place, manner...
sth	something	
swh	somewhere	
swy	someway	

- Exemples

  Open :$< x_{sb} >< y_{sth} >$

  $< John_x >$ *opened* $<$ *the* $door_y >$

  Watch :$< x_{sb} >< y_{sb/sth} >$

  $< I_{sb} >$ *watch* $< you_{sb}/$*the* $film_{sth} >$

Arrive $:< x_{sb/sth} > \| < x_{sb/sth} >< y_{swh} >$

$< I_{sb} >$ *can't arrive yet*

$<$ *The books*$_{sth} >$ *didn't arrive* $<$ *at the library*$_{swh} >$

1.6 Compulsory and adjunct valencies

- In many cases, predicates are accompanied by items which can be dropped.
  - *George bought some magazines <at the station> <before the departure>*
  - *George bought some magazines <before the departure>*
  - *George bought some magazines <at the station>*
  - *George bought some magazines*
- Non-eliminable elements.
  - *George bought <some magazines> at the station before the departure*
  - **George bought at the station before the departure*
- The compulsory elements are called ***actants***. They are settled by the predicate.

- The optional elements are called ***satellites***. They usually express external circumstances such as time, manner, place, cause, etc.
- So the hierarchy of semantics items is as follows:
  1. Predicates
  2. Actants
  3. Satellites
- This hierarchization is quite important when attending to syntax.
- Predicates are always the starting point for any syntactic analysis or parsing, since they.

Chapter 2

The Fundamentals of Syntax

2.1 Syntax and Grammar

- Syntax is the branch of linguistics devoted to the study of structures, i.e. the way in which words combine to express meaning through sentences.
- Words combine to make up sentences.
- The rules to combine words vary from language to language.
- If we compare both Spanish and English we can see this easily:
  1. Sp. *Tengo hambre* ⟶ litt. ?*I have hunger* ⟹ *I am hungry*
  2. Eng. *I like animals* ⟶ litt. **Yo gusto animales* ⟹ *Me gustan los animales*
  3. Sp. *Hablo bien alemán* ⟶ litt. **I speak well German* ⟹ *I speak German well*

2.2 Word classes

- Words belong to two major categories: lexical and functional ones.
- **Lexical words** are these having a complete meaning, so that they are the base of sentences.

- **Functional words** are mainly used with grammar purposes, such as it happens with conjunctions and all kinds of links, as well as morphemes.

- In GG this distinction is not always applied in this way. According to GG literature, there are four major kinds of words, which are the skeleton of syntax, being verbs the head of them:

  – Verbs (V)

  – Prepositions (P)

  – Nouns (N)

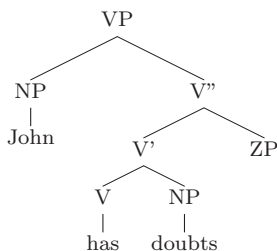
  – Adjectives (A)

2.3 The X-bar theory

- The way to combine words to make up a sentence is represented by means of the so-called 'X-bar'.

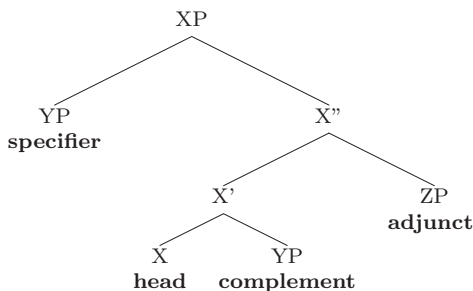
- X-bar refers to phrases.

- A phrase is a complex structure where a major element, its head, develops to incorporate other elements that complement its meaning.

- Let's take the example of a verb phrase. It also has two other attached elements depending on it. One is the subject and the other one is the object.

The first NP is embedded at the beginning of the tree, then there is a certain ZP which represent an Adverbial, now not included. At bottom, there is the verb and another NP, the object.

It seems evident that the verb is the head of all this structure. All the rest of elements depend on it.

If you compare this syntactic structure with a predicate frame, the similitude is enormous.

- The «abstract» representation of the X-bar, according to the previous model, is like this:

  - **Head**: the major item which controls and determines the category of the other ones.
  - **Specifier**: outer item which has a an initial relationship with the head, such as it happens between subject and verb.
  - **Complement**: inner item which emerges as a result of the verb projection, such as it happens between object and verb.
  - **Adjunct**: an extra element which can be avoided or dropped, such it happens with most adverbs referring to time, place, manner, etc.
  - Both specifiers and complements are related to **actants**, while adjuncts are related to **satellites**.

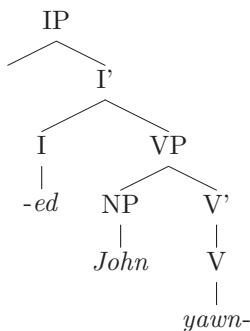
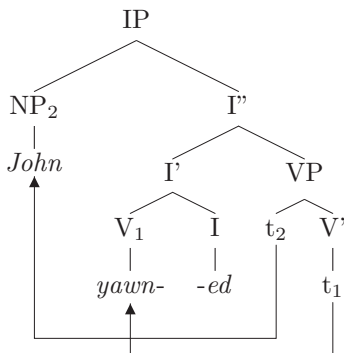
2.4 Into the syntactic representation of a sentence: VP and IP

- The minimal structure of any sentence, in any language, is composed by Inflection Phrase (IP) and Verbal Phrase (VP).

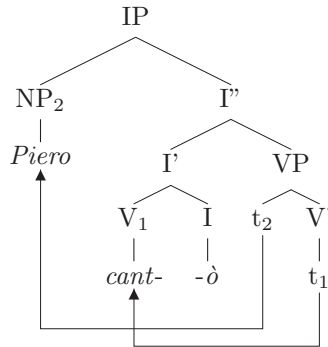
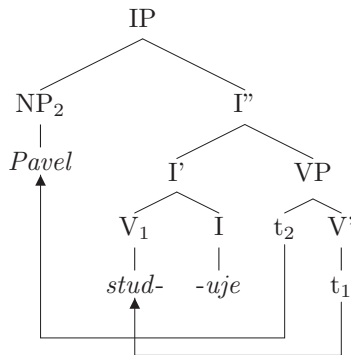
- IP is a functional category representing certain elements:

  - Time
  - Person (said Agreement, for example, between the predicate and the subject)

- Aspect
  - Perfective (a completed action)
  - Imperfective (an uncompleted or unfinished action)
- Voice
  - Active
  - Passive
  - Medial
- Etc.

- A verb needs rise from V to I to take inflection:[1]

- The ***rise*** is necessary for the verb (stem) to take an inflection (endings):

[1]In this case, **I**(nflection) stands for 3PS, simple past.

Observe also how in English, as well as in many other languages, the subject compulsory follows the verb in this movement upwards (called a-movement in GG. The movement of the items is expressed by means of subindexes.

- A similar example applied to a Romance language (Italian):

- A similar example applied to Czech:

Chapter 3

The theory of case

3.1 What a case is

- Case is a category corresponding to nouns and adjectives (and also demonstratives, articles and other determiners).
- It marks out the role they play within a sentence.
- Cases are narrowly linked to syntactic functions.
- Eg.:
  - Subject function is performed by a noun or NP in nominative.
  - Direct Object function is performed by a noun or NP in accusative.
- Cases are mostly assigned by verbs, but not always:
  - **Nominative**: It is the case by default; whenever a noun doesn't have a case, it takes nominative.
  - **Accusative** and **dative**: these are assigned by the verb.
  - **Genitive**: it is assigned by another noun.
  - **Ablative**, **Instrumental**, **Locative**...: they are assigned by prepositions in English.
- Some languages have special endings for cases and some others don't.

- All Romance languages and English (except for the so-called Saxon Genitive) lack declension endings (except for personal pronouns).

- Latin, German and Czech (as well as most Slav languages) do have endings to mark the case of adjectives and nouns.

3.2 Declension in Latin, Czech and German

Table 3.1: The first declension in Latin.

	SG	PL
Nominative	rosa	rosae
Accusative	rosam	rosas
Genitive	rosae	rosarum
Dative	rosae	rosis
Ablative	rosa	rosis

Table 3.2: An example of declension in Czech.

	SG	PL
Nominative	student	studenti
Accusative	studenta	studenty
Genitive	studenta	studentů
Dative	studentovi	studentům
Instrumental	studentem	studenty
Locative	studentovi	studentech

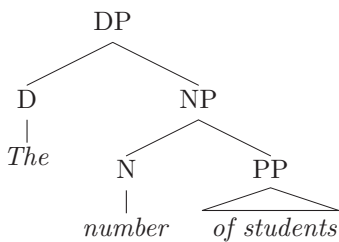
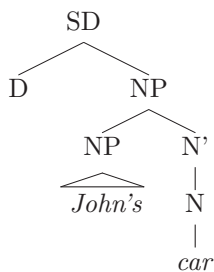
Table 3.3: The declension of *Mann* in German.*

	SG	PL
Nominative	der Mann	die Männer
Accusative	den Mann	die Männer
Genitive	des Mannes	der Männer
Dative	dem Mann	den Männern

*Together with the definite article.

3.3 Samples of declension

- Nominative
  - Lt: *Petrus amicus meus est*
  - En: *Peter is my friend*
  - Fr: *Pierre est mon camarade*
  - Gr: *Peter ist mein Freund*
  - Cz: *Petr je můj kamarád*
- Accusative
  - Lt: *Petrum video*
  - En: *I see Peter*
  - Fr: *Je vois Pierre*
  - Gr: *Ich sehe Peter*
  - Cz: *Vidím Petra*
- Genitive
  - Lt: *Domus Petri magna est*
  - En: *Peter's house is big*
  - Fr: *La maison de Pierre est grande*
  - Gr: *Peters Haus ist groß*
  - Cz: *Dům Petra je velký*
- Dative
  - Lt: *Petro presentem do*
  - En: *I give Peter a present / I give a present to Peter*
  - Fr: *Je donne un cadeau à Pierre*
  - Gr: *Ich giebe Peter ein Geschänk*
  - Cz: *Dám darek Petrovi*
- Ablative (Instrumental)
  - Lt: *(cum) Petro sum*
  - En: *I am with Peter*
  - Fr: *Je suis avec Pierre*
  - Gr: *Ich bin mit Peter*
  - Cz: *Jsem s Petrem*

3.3.1 Saxon and Norman Genitive in English

Chapter 4

Kernel and non-kernel sentences

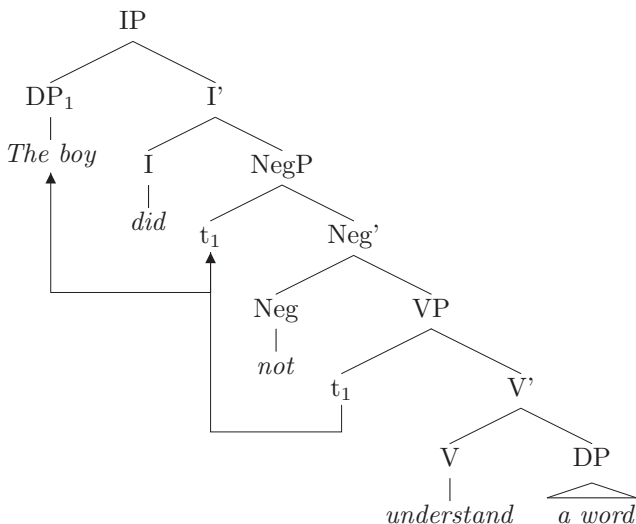
4.1 Kernel sentences and other added items

- All simple sentences require the minimal structure already mentioned:

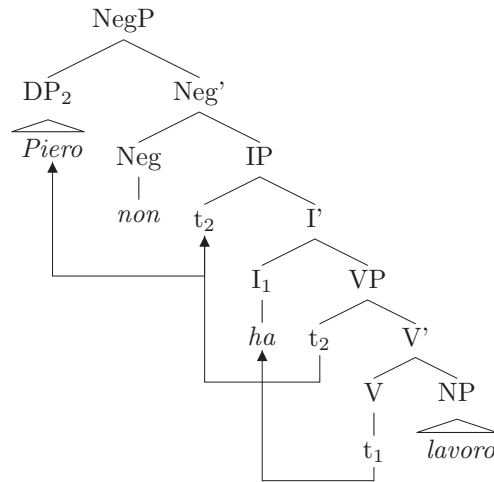
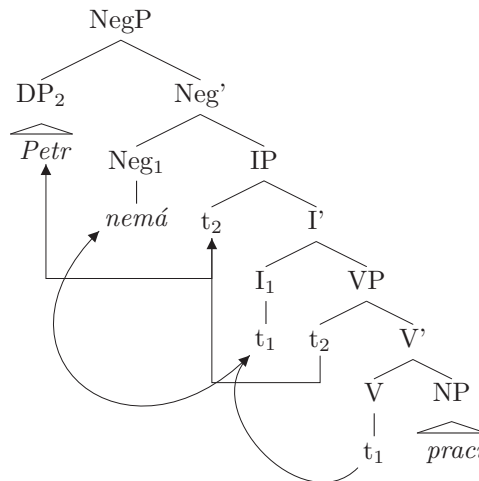
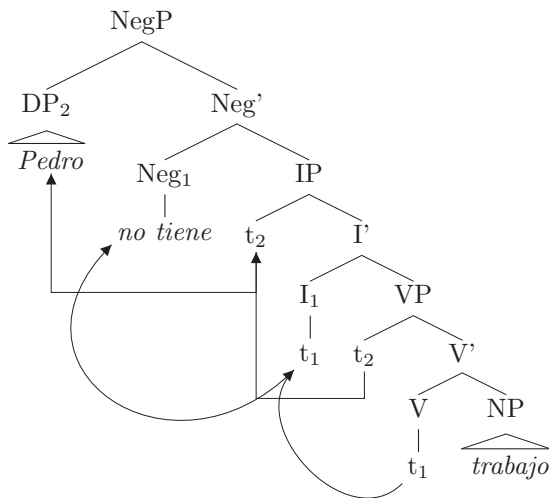
$$_{\text{IP}}[_{\text{I}}[_{\text{VP}}[_{\text{V}}[]]]]$$

- This minimal structure of a sentence is known as ***kernel sentence***.
- Anyway, some other items may be added to simple sentences:
  - Negation: *Peter doesn't understand it.*
  - Interrogation: *Did you buy the newspaper today?*
  - Focalisation: *My car they stole!*
  - Topicalisation: *In the morning, we will leave.*
- Each of these structures are represented by means of a functional phrase:
  - Negation: NegP (Negative Phrase)
  - Interrogation: IntP (Interrogative Phrase)
  - Focalisation: FocP (Focus Phrase)
  - Topicalisation: TopP (Topic Phrase)

4.2 Negative Phrase

- In English Modal verbs are required

The movement of the subject is always a rising one in English. Observe how it moves jumping through all the specifier nodes until reaches the top position.

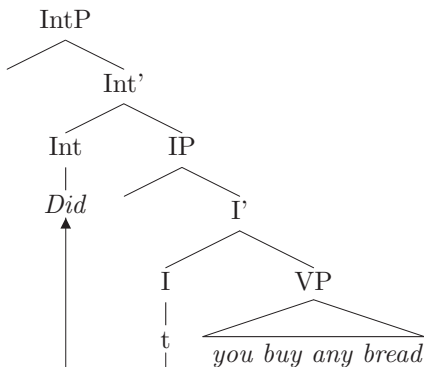
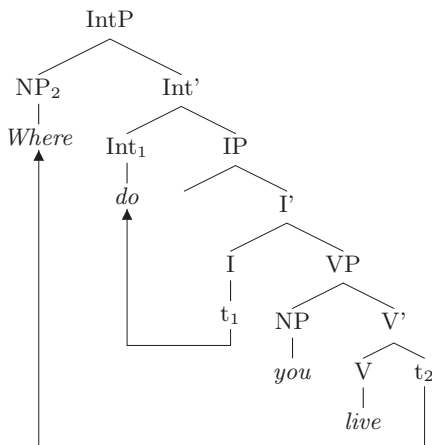
- In most Romance languages (others than French and Occitan), negation is instead placed at the beginning:

  - Sp: *Pedro no tiene trabajo*
  - Pt: *O Pedro não tem trabalho*
  - It: *Piero non ha lavoro*

- In Czech, negation works in a similar way as in Romance languages:

- In Czech, the negation head (*ne*-) is merged to the verb; in some Romance languages we also interprete negation in the same way, such as in the Iberian languages, though in spelling negation and verb are separated:

4.3 Interrogative Phrase

- In English, an interrogation is built up by means of a IntP that is always placed on top.

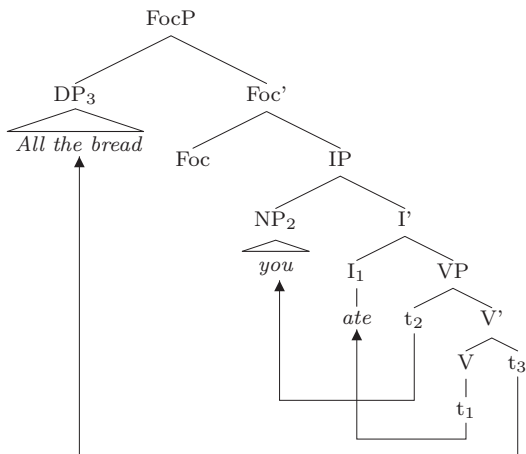
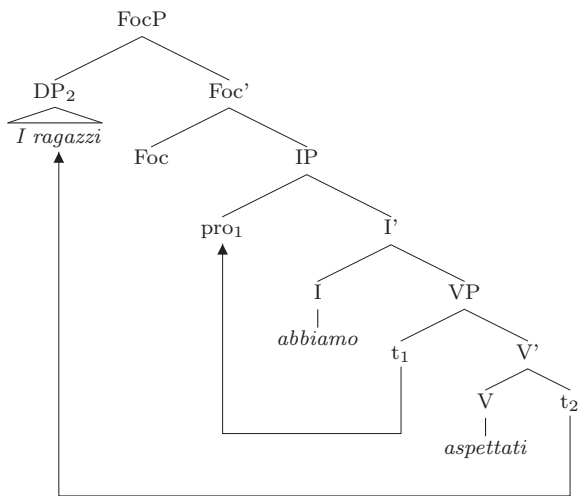
- There are two kinds of questions:

  – Closed questions: with an auxiliary verb but no *wh*-word: the answer is usually yes/no.

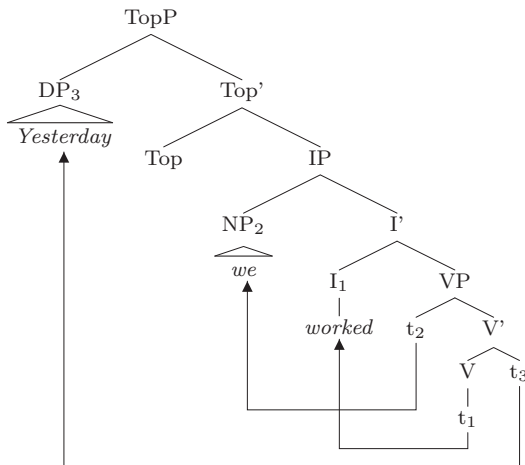
  – Open questions, with a *wh*-word.

The movement of the interrogative element, a *wh*-word is direct. It doesn't jump along the different nodes, as the rising subject does, but reaches the top position straight ahead.

The main difference between this open question and a closed one lies on the complexity of the structure of the open question. Take into account that open questions require a rising item which moves from VP into IntP. This rising item may be generated anywhere (specifier, complement or adjunct).

4.4 Focus Phrase

Focalisation is not very frequent in English, though it is quite usual in other languages, such as Romance ones. As a matter of fact, focalisation and interrogation work in the same way, where the focused elements moves forward straight ahead.

This is an example of focalisation applied to Standard Italian:

pro: this is an element not to be found in English, unless we treat with imperative clauses. This *pro* stands for covert or omitted subjects, usual in most Romance languages or Czech.

4.5 Topic Phrase

The main difference between a Topic and a Focus stands on their semantic status. Focus are elements generated within VP that rise up in order to be emphasised (i.e., they transform an unmarked sentence into a marked one).

Instead, topics are added elements that can be dropped without affecting the correcteness of the sentence. They usually refer to time, place, manner and other semantic items.

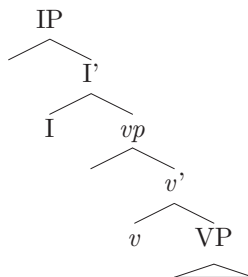
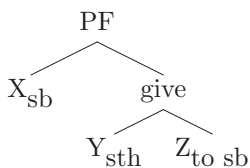
Chapter 5

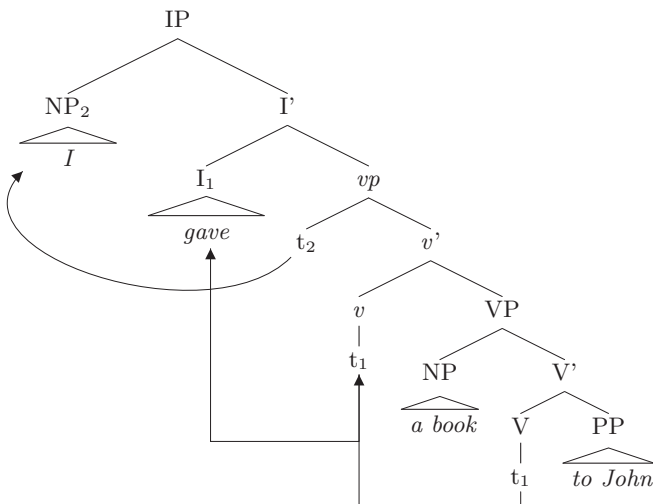
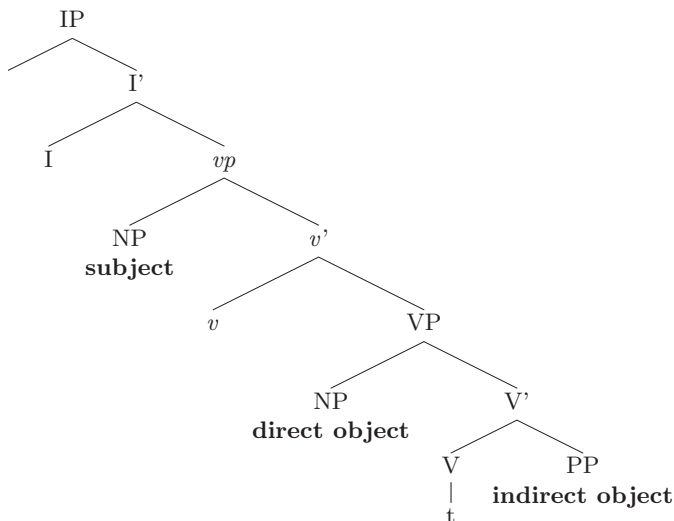
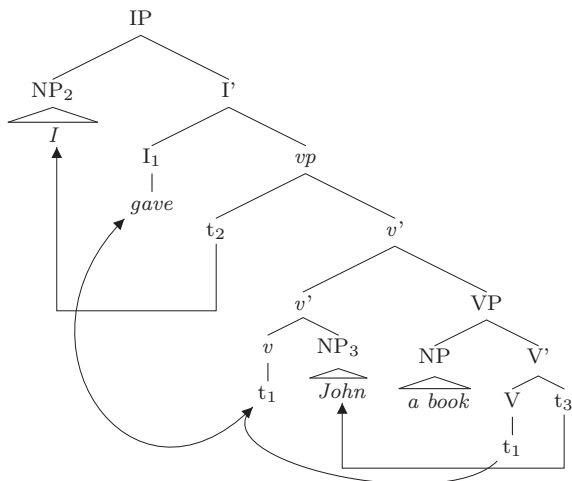
The *vp*-shell

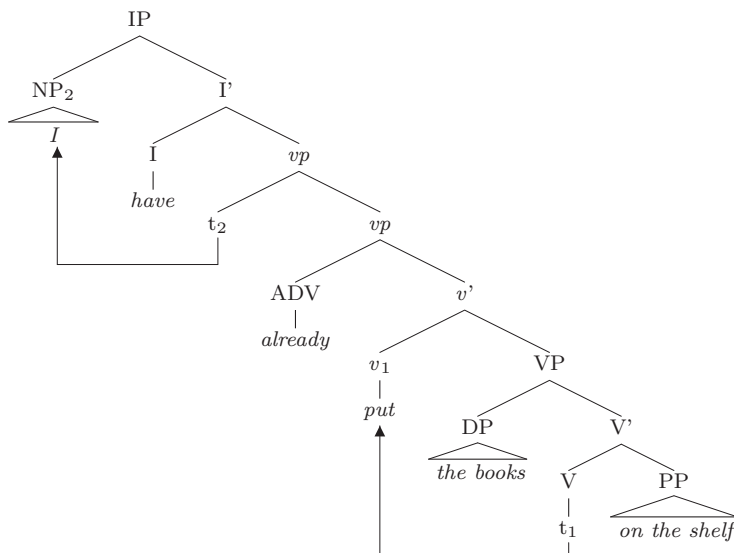
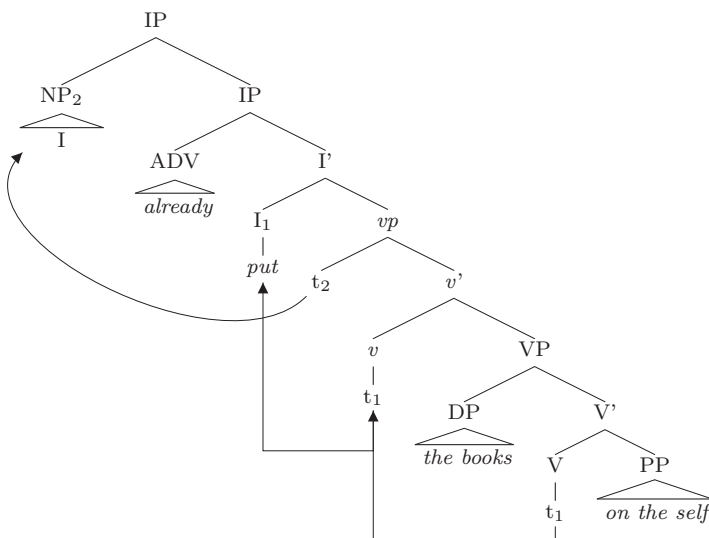
5.1 What is the *vp*-shell

Whenever there is a sentence having two objects (remember the so-called bivalent verbs), GG has to introduce a new way to analyse this kind of sentence.

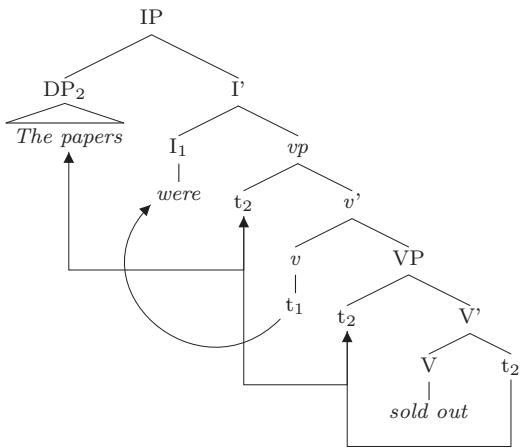
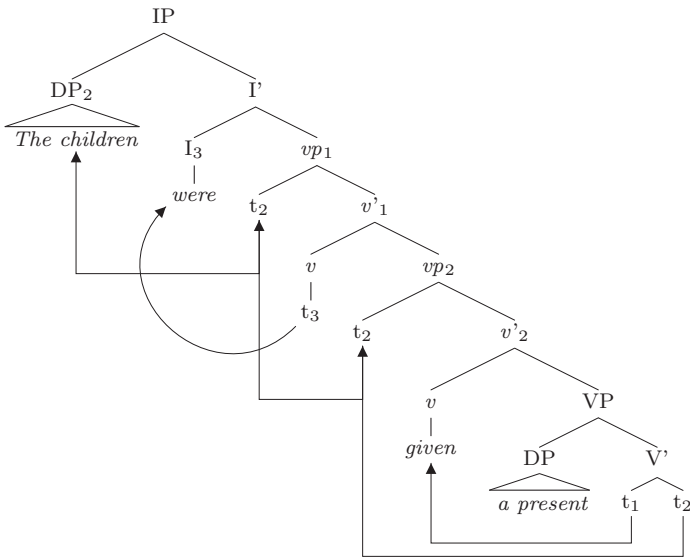
In these cases, verbs need to be *spread out* so that the three compulsory items accompanying the verb may fit in the syntactic structure. For this purpose, *vp* shell is introduced, so that we can still consider it as a kernel sentence.

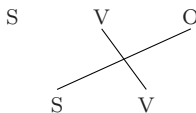
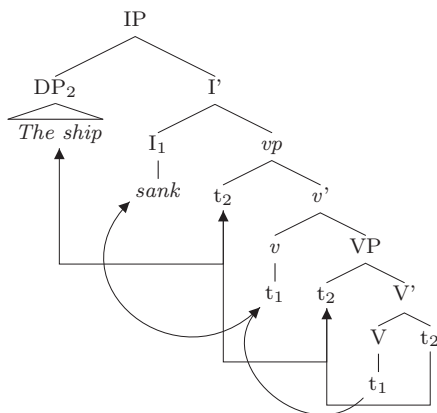
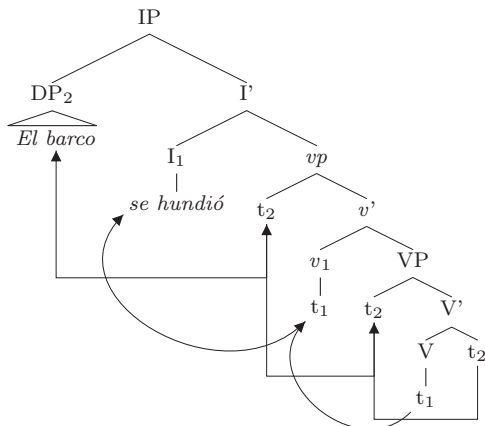
Observe the PF corresponding to *give* and its *vp*-shell representation:

5.2 The *vp*-shell and the Indirect Object

In a sentence like *I gave a book to John*, there are three compulsory element: subject, direct object and indirect object. Their generation is as follows.

It is, however, quite usual that Od and Oi are placed in different order in English: *I gave John a book*. This change may also be represented by means of *vp*.

5.3 A frequency adverb: double specifier

Frequency adverbs (and some other usual adverbs) always have a fixed position in the clause: a double specifier in *vp*.

Anyway, the double specifier could be in IP, namely when the verb is simple.

5.4 The passive voice

The passive voice may be understood as containing a *vp*. It is probably better to include a new functional phrase, but for reasons of simplicity, we will treat passive voices as being composed of a *vp* and a VP, but they are not properly kernel sentences.

In this case, the subject is originated in the node of **complement** and immediately moves to the **specifier** node.

A passive sentence having an originally Oi as its subject must be analysed with a double vp, being the first one the corresponding to passivisation and the second one to ditransitive sentences.

5.5 An ergative sentence

An ergative sentence in English is one suffering an important transformation: an initially transitive sentence loses its subject but its object occupies its place.

In this way, the agent of the process disappears: *The torpedo sank the ship* $\longrightarrow$ *The ship*$_1$ *sank* t_1.

In most Romance languages, ergative sentences are built by means of *se*, which is originally generated under *vp*.

Chapter 6

Completive Clauses

6.1 Complementiser Phrase

- A complex sentence is one having two or more clauses.
- Up to now, we have just seen simple sentences, i.e., sentences containing only one clause.
- Whenever there is a complex sentence, there is a main clause and a dependent clause.
- Dependent clauses may be:
  - Attached: ***If I were you***, *I would change that bulb* || ***When you finish that***, *you can leave.*
  - Embedded:
    - Completives: *He said* ***that he didn't understand that sentence***.
    - Relatives: *The man* ***whom we helped*** *was blessed.*
- All dependent clauses are introduced by means of a complementiser, which is expanded into the category of **complementiser phrase**.

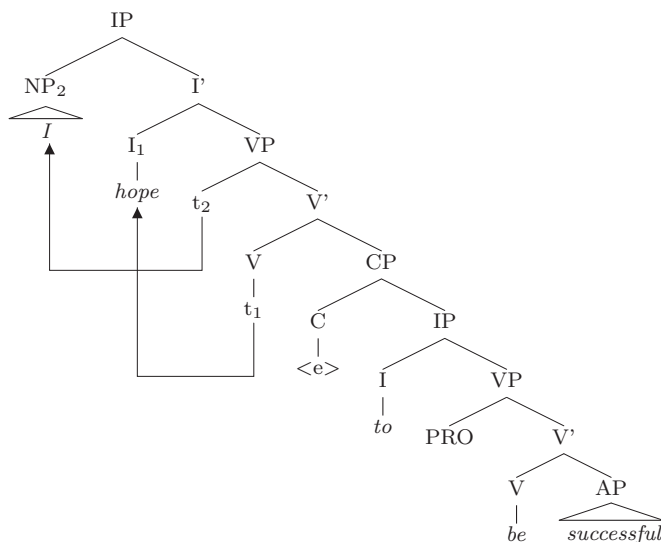
6.2 Completive clause

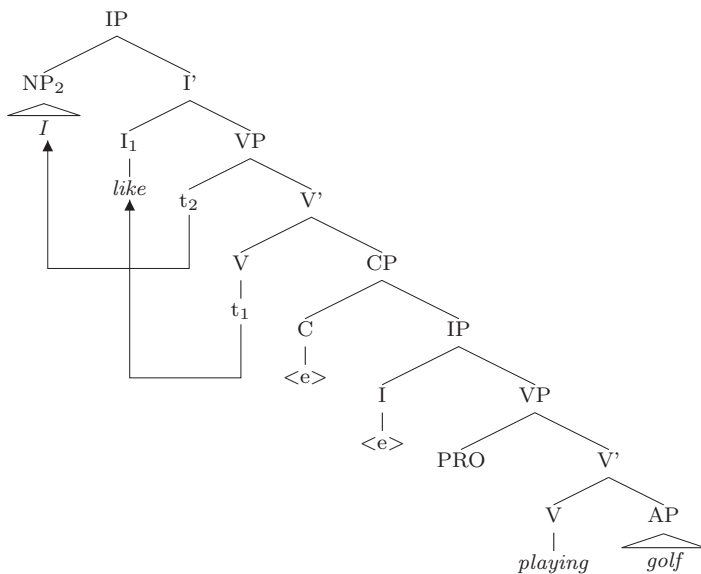
Completive clauses are usually introduced by:

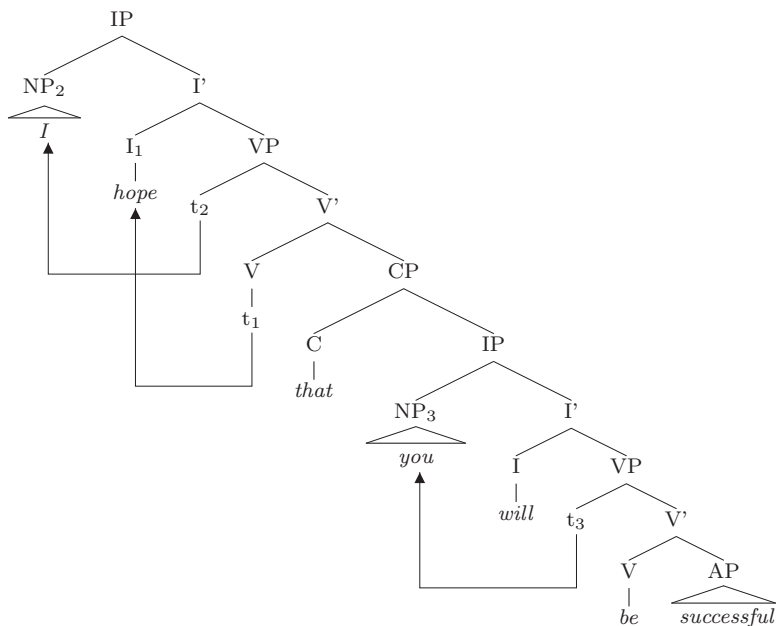
- *To*, in which case the verb is in infinitive: *Mark hopes to be successful.*
- *That*, in which case the clause behaves: *Mark hopes (that) you'll be successful.*
- *Whether/if*, though these work as the former ones: *I don't know whether/if he's right.*

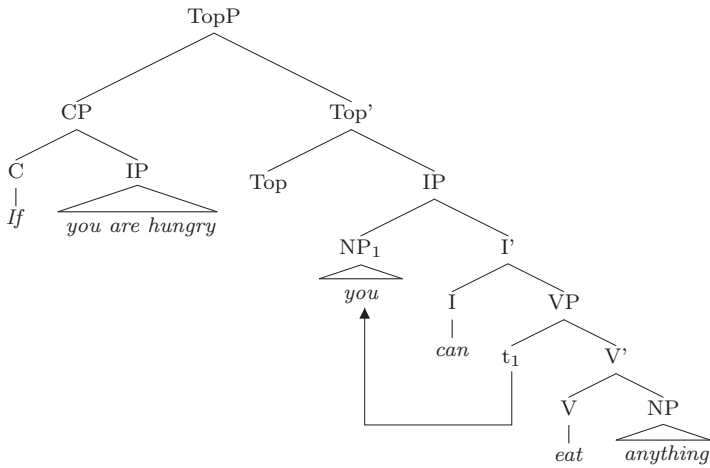
6.3 A *to*-clause

Infinitive clauses in English must take *to* in most cases. Here the verb doesn't rise (there's no α-movement). PRO stands for an absent subject, which can never be overt (=explicit), but it coincides to be the same as in the main clause.

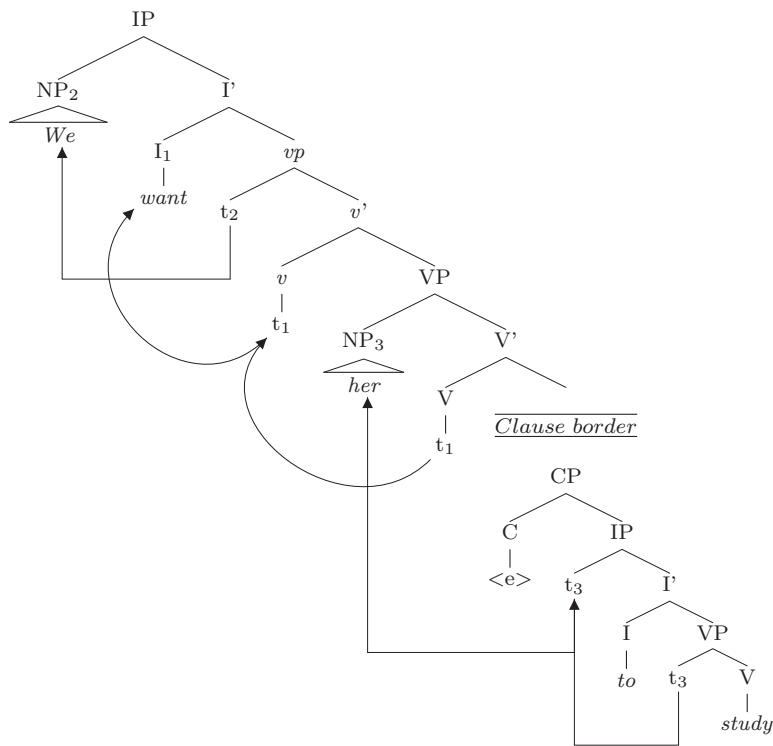
A *pro* is instead an covert subject, which can be overt at any moment. In Romance languages or Czech this is quite usual.

6.4 Clauses with -*ing*

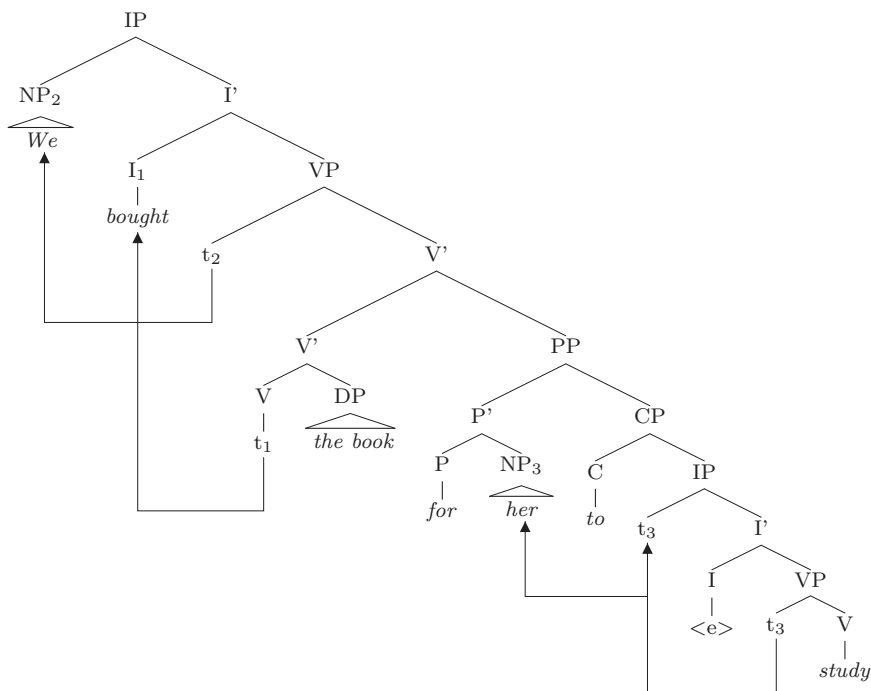
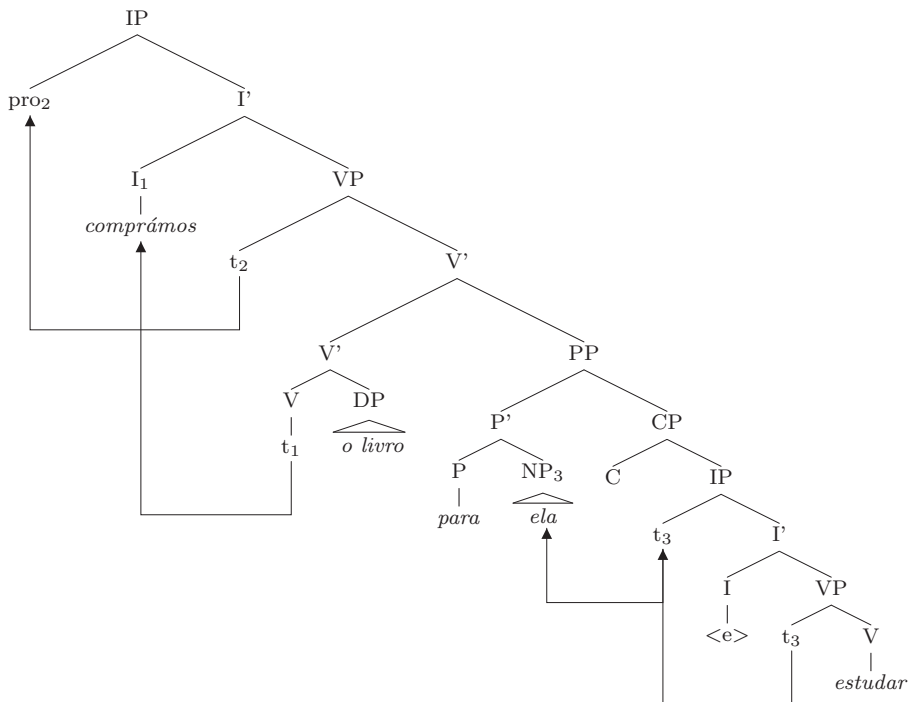
Clause with -*ing* are supposed no to have any kind of introductory particle (like *to*).

6.5 A *That*-clause

In this case, the *that*-clause behaves exactly as a simple clause, suffering all the α-movements.

6.6 An attached clause: conditional clause

A conditional clause is the typical example of an attached clause. It also works independently, though it must be introduced by means of a complementiser, in this case if, the usual link word.

6.7 Object rise

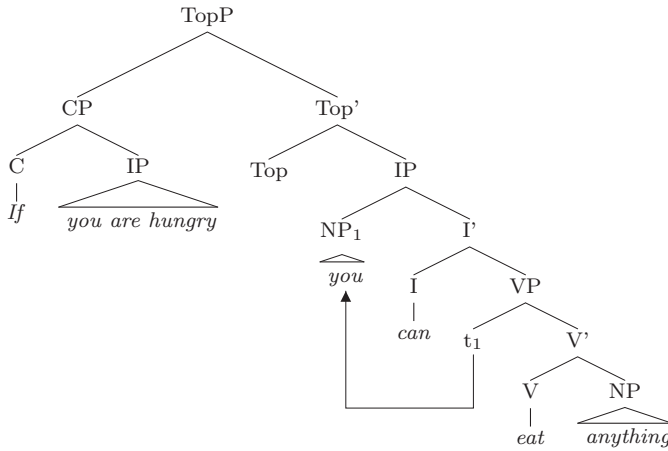
Verbs like *want*, *like*, *invite*, *offer*, etc. ≪attract≫ the object of the completive sentence into the main one.

CP is usually a border that can't be overcome, however, certain verbs are strong enough to attract the subject of the second clause into the first one; however, they change their original nominative case into accusative, since there's already one nominative-subject operator.

6.8 Clauses with *for*

Certain clauses are also *to*-completives, but they include a *for* which is usually accompanied by an object pronoun, in fact the subject of the completive clause.

Final clauses in Portuguese work exactly the same, with the exception that the subject remains in nominative because there's no rise to the preposition node.

6.9 An attached clause: conditional clause

A conditional clause is the typical example of an attached clause. It also works independently, though it must be introduced by means of a complementiser, in this case *if*, the usual link word.

Chapter 7

Relative Clauses

7.1 What a relative clause is

Relative clauses are formed by the union of two independent clauses having one common item:

{You bought a book} + {The book was interesting}

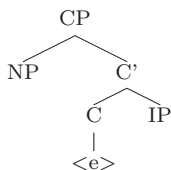
⇓

You bought a book that was interesting

In the former examples, *the book* is considered the **referent**. The pronoun *that* needs this referent to acquire a meaning. Relative pronouns have a syntactic function within the clause (subject, object, etc.).

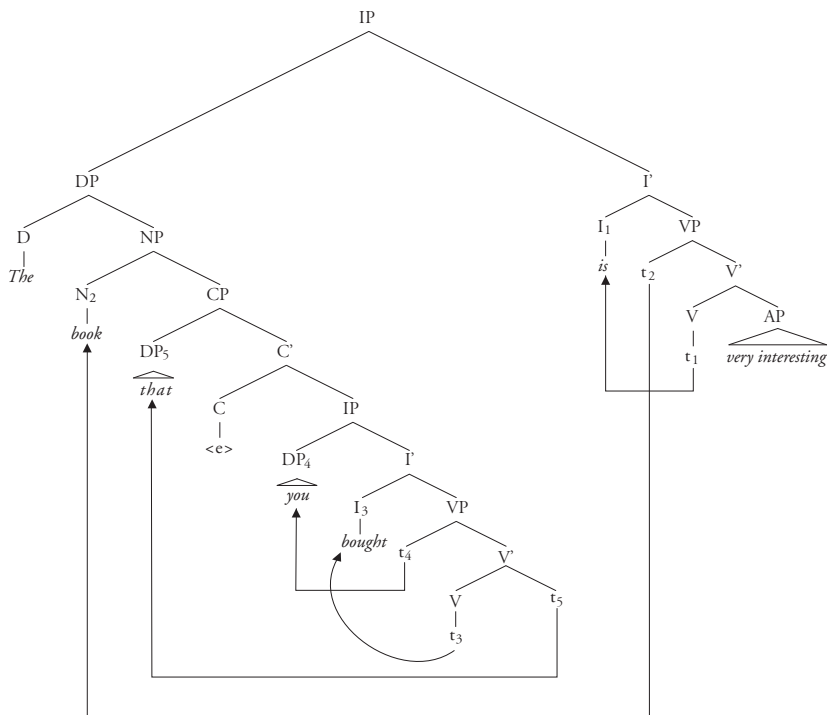
One of the main differences between a completive and a relative clause lies on the place that the link words occupy:

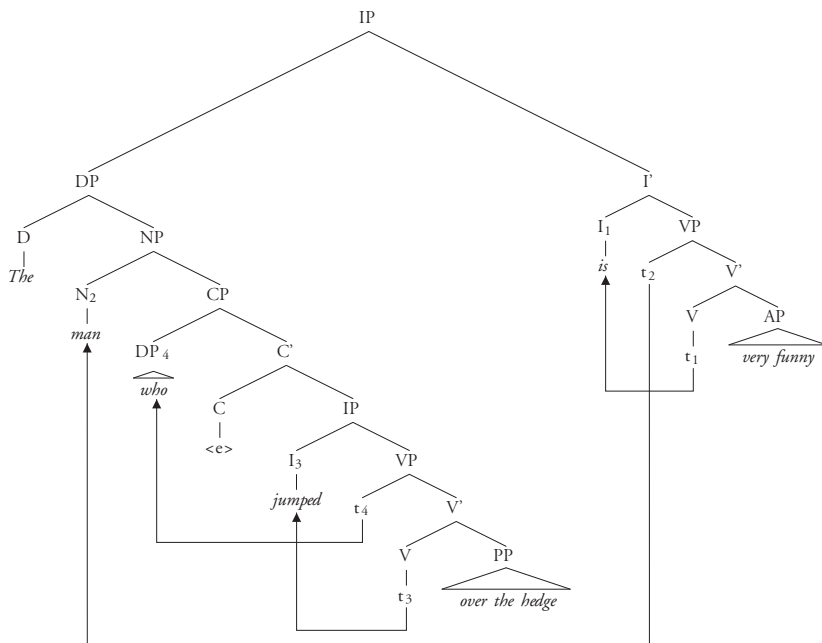
- In completive clauses, the complementiser has no syntactic function, so it is a head.

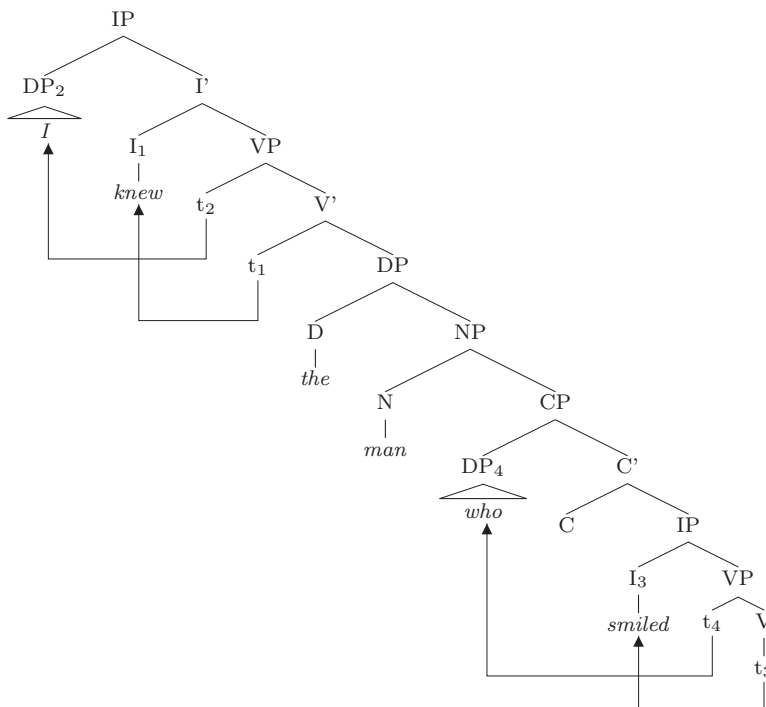
- In relative clauses, the relative pronoun isn't a complementiser, so it occupies a specifier position.

Relative clauses are introduced by a CP. The behaviour of relative clauses is exactly the same of interrogative phrases.

7.2 Relative pronoun as an object

That is here the object of the relative clause. It could also be omitted, in which case it would be a *pro*.

IP
DP
I'
D
NP
I_1
VP
The
is
t_2
V'
N_2
CP
V
AP
book
DP_5
C'
t_1
very interesting
that
C
IP
<e>
DP_4
I'
you
I_3
VP
bought
t_4
V'
V
t_5
t_3

7.3 Relative pronoun as a subject

Who is here the subject of the relative clause. *That* could also be possible here.

7.4 Relative pronoun within the object

Who is here the subject of the relative clause. *That* could also be possible here.

7.5 More questions concerning relative pronouns

Other relative pronouns fulfil different functions. So, *when* or *where* have also a relative use even in time and place clauses, as in:

$_{IP}$[$_{CP}$[*When the autumn arrives*] *everybody gets nervous*]

How may also work similarly in:

$_{IP}$[$_{CP}$[*How*$_1$*you manage your business* t_1]$_2$ *is a mystery* t_2]

Language Index